

## CLAIMS

1. A high-frequency current suppressor comprising a flexible  
5 member capable of being attached to a cable.

2. A high-frequency current suppressor as claimed in claim 1,  
wherein said flexible member comprises a break which elongates  
over all length along an axial direction of said cable.

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3. A high-frequency current suppressor as claimed in claim 1,  
wherein said high-frequency current suppressor comprises at least  
two layers which consist of a high-frequency current suppressing  
layer and at least one outer layer.

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4. A high-frequency current suppressor as claimed in claim 3,  
wherein said outer layer is consisting of either a molded resin or a  
molded metal, or combination of said molded resin and said molded  
metal.

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*Sub 127* 5. A high-frequency current suppressor as claimed in any one of  
claims 1 through 4, wherein said high-frequency current suppressor  
is consisting of composite magnetic material which comprises soft  
magnetic powder obtained by flattening alloy powder including at  
25 least Fe, Si, Al, and binding material.

6. A high-frequency current suppressor as claimed in any one of  
claims 1 through 4, wherein said high-frequency current suppressor

**Sch 27** is consisting of composite magnetic material which comprises soft magnetic powder obtained by flattening alloy powder including at least Ni, Fe, and binding material.

- 5 7. A high-frequency current suppressor as claimed in any one of claims 1 through 4, wherein said high-frequency current suppressor is consisting of magnetic loss thin film which comprises a first member consisting of at least any one of Fe, Co, Ni, or mixture thereof and a second member consisting of insulating material
- 10 including at least more than one kinds of elements other than said Fe, Co, Ni.
8. An earphone system for use in a terminal of mobile communication, wherein said earphone system is provided with
- 15 said high-frequency current suppressor as claimed in any one of claims 1 through 7.
9. An earphone system comprising a connection plug connected to an output terminal of an electronic equipment, an earphone, and a
- 20 signal cable for connecting said connection plug with said earphone, wherein a high-frequency current suppressor consisting of soft magnetic material is added at least partially to any one of said connection plug, said earphone, and said signal cable.
- 25 10. An earphone system as claimed in claim 9, wherein a part or a whole of outer circumference of said signal cable is covered by said high-frequency current suppressor.

11. An earphone system as claimed in claim 9 or 10, wherein a part or a whole of outer circumference of an outer conductor of said signal cable is covered by said high-frequency current suppressor.

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12. An earphone system as claimed in any one of claims 9 through 11, wherein said high-frequency current suppressor is provided near a portion where said signal cable and said earphone are connected to each other.

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13. An earphone system as claimed in any one of claims 9 through 12, wherein said high-frequency current suppressor is included inside said earphone.

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14. An earphone system as claimed in any one of claims 9 through 13, wherein said earphone system further comprises a microphone.

15. An earphone system as claimed in claim 14, wherein said high-frequency current suppressor is included inside said microphone.

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16. An earphone system as claimed in any one of claims 9 through 15, wherein a housing of said earphone or said microphone is formed by said high-frequency current suppressor.

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17. An earphone system as claimed in any one of claims 9 through 16, wherein said high-frequency current suppressor is consisting of composite magnetic material which comprises soft magnetic powder obtained by flattening alloy powder including at least Fe, Si, Al,

*Sub-4* and binding material.

18. An earphone system as claimed in any one of claims 9 through 16, wherein said high-frequency current suppressor is consisting of  
5 composite magnetic material which comprises soft magnetic powder obtained by flattening alloy powder including at least Ni, Fe, and binding material.

19. An earphone system as claimed in any one of claims 9 through  
10 16, wherein said high-frequency current suppressor is consisting of magnetic loss thin film which comprises a first member consisting of at least any one of Fe, Co, Ni, or mixture thereof and a second member consisting of insulating material including at least more than one kinds of elements other than said Fe, Co, Ni.